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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,512	01/12/2001	Simon Daniel Scullion	33718 PCTUSA	6044

21003 7590 10/18/2004

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EXAMINER	
SHERRER, CURTIS EDWARD	
ART UNIT	**PAPER NUMBER**
1761	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/700,512	SCULLION ET AL.	
	Examiner	Art Unit	
	Curtis E. Sherrer	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04/12/04* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *108-170* is/are pending in the application.

4a) Of the above claim(s) *133-159 and 168-170* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *108-132, and 160-167* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 108-167 been renumbered 111-170.

Claims 165 and 166 are objected to because of the following informalities: the term "eternally" should be spelled "externally" and/or "internally." In Claim 133, the term "ahead" should be spelled "a head." Appropriate correction is required.

Election/Restrictions

Claims 133-159 and 168-170 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 125-127, 161-162 and 164 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" in claims 125-127, 161-162 and 164 is a relative term that renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 111-112, 117-118, 127, 128 rejected under 35 U.S.C. 102(b) as being anticipated by Cassidy (San Jose Mercury News, Morning Ed., Final, Science and Medicine, page 1C).

Cassidy teaches the well known effect of chilling beer, in a container, down to a temperature so that it is nearly frozen. Then, when the beer container is opened the beer will freeze up. "When the beer is opened, some of the carbon dioxide bubbles out of the liquid, the freezing point rises to a higher temperature and the beer promptly freezes." Page 3, bottom.

While Cassidy is silent as to the application of ultrasound from sources, such as music, light displays and illumination, the beer of Cassidy was inherently tested while being exposed to illumination.

It is inherent that the ice formed in the beer of Cassidy is formed form the water contained in the beer. Further, because ice floats, the ice will inherently develop from the top down below the head of the beer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 129, 130, and 160-165 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassidy.

Cassidy teaches that cited above. Cassidy does not teach the use of ultrasound that emanates from music or flashing lights. It is notoriously well known to drink beer in comfortable and enjoyable settings that are inherently accompanied by music. Further, many bars, where beer is notoriously consumed, routinely have live performances, which include light shows. Therefore, it would have been obvious to those of ordinary skill in the art to consume the supercooled beer of Cassidy in a bar surrounded by music and/or a light show because a bar is a very common venue in which to consume beer.

The claims directed to the supercooling and ultrasound exposure of cider are obvious because it would have been obvious to those of ordinary skill in the art to

dispense a cider so that it freezes, because cider is notoriously consumed beverage. Applicants admit to the old and well known consumption of cider.

Claims 111-114, 117-118, 124-127, 160-164 and166 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassidy in view of Botsaris *et al.* (U.S. Pat. No. 5,966,966)("Botsaris").

Cassidy teaches that cited above. Cassidy does not explicitly teach the use of ultrasound to effect the ice crystallization. Botsaris teach a process and system for freeze concentration using ultrasonic nucleation, also called sonocrystallization. (Abstract). In the process the effluent is supercooled to below the freezing point of water and then exposed to internal ultrasound while agitating. See Fig. 1. While the patent disclosure is preferably directed to pulp mill effluents, it broadly teaches the use of the process for liquids. It is noted that Botsaris refers to fruit juice concentration. (Col. 2, lines 11-33). It would have been obvious to those of ordinary skill in the art to use ultrasound, as is disclosed by Botsaris, as nucleation means of Cassidy because it is commonly used to create ice crystals in supercooled fluids.

Botsaris teaches that the ultrasonic generator operates a frequency of approximately "20 k to 23 k Hz." (Col. 4, lines 23-27).

It is inherent that the ice formed in the beer of Cassidy is formed form the water contained in the beer. Further, because ice floats, the ice will inherently develop from the top down below the head of the beer.

The claim directed to the supercooling and ultrasound exposure of cider are obvious because it would have been obvious to those of ordinary skill in the art to

dispense a supercooled cider so that it freezes with the added exposure of ultrasound, as taught by Botsaris, because cider is notoriously consumed beverage. Applicants admit to the old and well known consumption of cider.

Claims 115, 116, 119-123 and 167 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassidy in view Botsaris and in further view of Phanny (www.mit.edu/~mbarker/sum97/awar970630.txt, June 30, 1997).

Cassidy and Botsaris teach that cited above, but the prior art does not teach the combined use of a ultrasound generator with a beer tap so that the prior supercooled beer would be exposed to ultrasound as it exits the tap. It would have been obvious to those of ordinary skill in the art to dispense supercooled beer from a beer tap, because beer is notoriously well known to be dispensed from beer taps, Phanny teaches, albeit fictionally, the use of a "supercooled tap beer line" to deliver lager to customers. It would have been obvious to those of ordinary skill in the art to use the fictional supercooled beer tap line of Phanny to deliver supercooled beer of Cassidy in view of Botsaris in a process of delivering supercooled beer because it is well known to deliver supercooled via a beer tap.

Further, it would have been obvious to make the ultrasound generator of Botsaris integral with the beer tap of Phanny. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965)(A claim to a fluid transporting vehicle was rejected as obvious over a prior art reference which differed from the prior art in claiming a brake drum interface with a clamping means, whereas the brake disc and clamp of the prior art comprise several parts rigidly secured together as a single unit. The court affirmed the rejection

holding, among other reasons, "that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice.")

Claim 131 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cassidy in view of Schneider (U.S. Pat. No. 4,322,008).

Cassidy teaches that cited above but does not teach the use of an internal formation for encouraging the formation of ice. Schneider teaches the well known placement of a roughened region inside a beer container. While Schneider teaches that the region will induce the formation of foam it will also inherently create the formation of ice. It would have been obvious to one of ordinary skill in the art to place the foaming means of Schneider in the beer container of Cassidy because it provide for the formation of gas bubbles. (Col. 1, lines 37-58 and Figures).

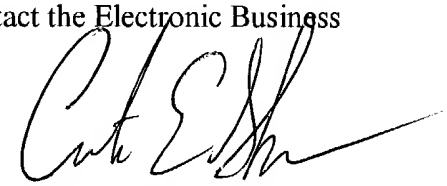
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. El-Boher et al. (U.S. Pat. No. 5,383,342) teaches the production of ice and the use of ultrasound in a tubular element in order to enhance the crystal nuclei formation. (Col.6, lines 12-30).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis E. Sherrer, Esq. whose telephone number is 571-272-1406. The examiner can normally be reached on Tuesday-Friday, 8AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Primary Examiner
Art Unit 1761